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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/560,122	04/28/2000	Too Yew Teng	1961-00100	3390

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EXAMINER

VUONG, BACH Q

ART UNIT	PAPER NUMBER
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2653

DATE MAILED: 10/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/560,122

Applicant(s)

TENG ET AL

Examiner

Bach Q. Vuong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,8-11,13,15-19,21 and 24-52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,3,4,8-11,15-17 and 24-36 is/are allowed.
- 6) ☒ Claim(s) 18,19,21 and 47-52 is/are rejected.
- 7) ☒ Claim(s) 37-46 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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This communication is responsive to an amendment filed on 06/28/2004

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 18, 19, 21 and 47-52 are rejected under 35 U.S.C. 102(b) as being anticipated by Shimono et al. (JP 09281054 A).

Shimono et al., according to Figs. 1-16, shows an apparatus for detecting cracks in optical discs comprising all features of the claimed invention.

Regarding claim 18, see Figs. 2-7, 10, 11 and 14 and 16 which show a systems for detecting cracks in optical discs which is having an outer edge and an inner edge comprising: a disc drive for spinning the optical disc (see rotating unit 51, in Fig. 2); at least one transmitter (see laser source 2 and detecting unit 53) for propagating a light signal directed towards the inner edge of the optical disc; at least one receiver (see Defect detecting unit 52 and 54) configured for receiving propagated light signal reflected by at least one crack in the disc; and a microcontroller (see control surface in Abstract of JP 09281054 A) coupled to the receiver for analyzing received light signals, wherein the system is configured to direct the presence of a crack by an increase in propagated light received by the at least one receiver (see paragraph [0037] through [0040] for details).

Regarding claim 19, see Figs. 2, 6 and 11 which show a system for detecting cracks in optical discs wherein the receiver (see defect detecting unit 54) is located below the disc.

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Regarding claim 21, see Figs. 2-7 and 11 which show an optical disc drive comprising a traverse mechanism for spinning the disc and retrieving information from the disc, a loader mechanism for loading the disc onto traverse mechanism, and a crack detection mechanism, comprising: a transmitter (see laser source 2 and transmitter 53) positioned below the optical disc for propagating a light signal through the interior of the spinning optical disc; a receiver (see defect inspecting unit 52) mounted on the disc drive and having a light sensor positioned to receive the light signal emerging from the disc; wherein the receiver is adaptive to receive propagated signals reflected by at least one crack in the disk (see Figs. 10, 11 and 16 for details); and a microcontroller (see control surface in Abstract of JP 09281054 A) coupled to the receiver for analyzing received light signals.

Regarding claims 47, see Figs. 1, 2, 6, 7, 10, 11, 14 and 16 which show an optical disc drive system comprising: an optical disc drive (see Figs. 1-4 for details) configured for performing an inspection operation of the disc and at least one of a read and write operation on the disc; a transmitter (see element 53) for propagating a light signal through the interior of the spinning optical disc; and a receiver (see element 52) positioned to receive light emerging from the disc, wherein the transmitter and the receiver are configured to determine the presence of a crack in the disc during the inspection operation (see detecting unit 54 and the respective disclosure of Fig. 10).

Regarding claim 48, see Figs. 6, 11, 14 and 16, 14 and 16 which show an optical disc drive system wherein the transmitter (see light source 2 and elements 53) is positioned such that the light signal is propagated from a point on the outer edge of the disc and along the plan of the disc.

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Regarding claim 49, see Figs. 1-11, 14 and 16 which show an optical disc drive system wherein the receiver (see element 52) is configured to receive reflected propagated light (see light 102a in Fig. 10) emerging from the disc.

Regarding claims 50 and 51, see Figs. 1-11, 14 and 16 which show an optical disc drive system wherein the receiver is configured to receive unreflected propagated light emerging from the disc and wherein the presence of a crack is determined by a decrease in the quantity of unreflected propagated light emerging from the disc. (see the respective disclosure of Fig. 10).

Regarding claim 52, see Figs. 1-11, 14 and 16 which show an optical disc drive system further comprising a microcontroller (see signal-processing section 32 and also see control surface in Abstract of JP 09281054 A) coupled to the receiver for analyzing signals received thereof.

Allowable Subject Matter

Claims 37-46 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 37-46 are allowable over the prior art of record because all the references in the record, considered as closest references and viewed in combination or individually, fails to suggest or fairly teach a system for detecting cracks in optical discs including combination of all limitations as recited in each of claims 37 and 42. Claims 38-41 and 43-46 are allowed with their respective parent claim.

Claims 1, 3, 4, 8-11, 13, 15-17, 24-36 are allowed.

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Response to Arguments

In response to Applicant's arguments filed 06/28/2004 related to the rejection under 35 USC-102 as being anticipated by Shimono et al. (JP 09281054 A). Applicant's attention is drawn to Figs. 1-6, 10, 11, 14 and 16 which show a light transmitter and reflected light receiver (see detecting elements 52-54) for detecting any defect or cracks on a disc (see paragraphs [0037] through [0040] for details). Accordingly, Shimono et al do disclose all limitations as recited in claims 18, 21 and 47.

In response to Applicant's arguments filed 03/23/2003, Applicant's attention is drawn to the abstract and the summary of Kim which clearly describe an aberration occurring at the objective lens due to a difference in wavelength between the two light sources. Also, Applicant's attention is drawn to Fig. 4 of Lee et al. (US 6,078,555) which clearly discloses that an aberration occurring at the objective lens due to a difference in wavelength between the two light sources, and the optical-path length from a first light source to an objective lens that is obviously longer than that from a second light source to the objective lens.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory

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period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bach Q. Vuong whose telephone number is (703) 305-7355. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on (703) 305-6137. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BV
October 6, 2004


THANH V. TRAN
PRIMARY EXAMINER